

**A. AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (withdrawn): A composition comprising (1) an algal biomass or any parts thereof, wherein the algal biomass is chosen from eukaryotic algae or prokaryotic algae sources, and (2) one or more proteins, peptides, antibodies, antibody fragments, or combination thereof, which are non-native to the algae of the biomass.

2 (withdrawn): The composition of claim 1, wherein the composition is a feed.

3 (withdrawn): The composition of claim 1, wherein the composition is a feed additive.

4 (withdrawn): The composition of claim 1, wherein the composition is therapeutic.

5 (withdrawn): The composition of claim 1, wherein the protein, peptide, antibody, antibody fragment, or combination thereof is expressed recombinantly.

6 (withdrawn): The composition of claim 5, further comprising a recombinant virus that expresses the protein, peptide, antibody, antibody fragment, or combination thereof.

7 (withdrawn): The composition of claim 1, wherein the composition inhibits the growth or replication of a pathogen.

8 (withdrawn): The composition of claim 7, wherein the pathogen is *Vibrio*.

9 (withdrawn): The composition of claim 7, wherein the pathogen is chosen from Taura Syndrome Virus, White Spot Syndrome Virus, and Infectious Pancreatic Necrosis Virus.

10 (withdrawn): The composition of claim 1, wherein the protein, peptide, antibody, antibody fragment, or combination thereof is bactericidal or bacteriostatic.

11 (withdrawn): The composition of claim 10, wherein the protein, peptide, antibody, antibody fragment, or combination thereof is chosen from cecropins, penaeidins, bactenecins, callinectins, myticins, tachyplesins, clavanins, misgurins, pleurocidins, parasins, histones, acidic proteins, and lysozymes.

12 (withdrawn): The composition of claim 1, wherein the protein, peptide, antibody, antibody fragment, or combination thereof comprises an immunogenic epitope.

13 (withdrawn): The composition of claim 1, wherein the algal biomass comprises heterotrophic microalgae.

14 (withdrawn): The composition of claim 1, wherein the algal biomass comprises photosynthetic microalgae.

15 (withdrawn): The composition of claim 1 wherein the algae are chosen from *Synechocystis* and *Chlorella* strains.

16 (withdrawn): The composition of claim 1, wherein the algae are probiotic.

17 (withdrawn): A method of feeding an animal comprising administering to said animal a composition comprising (1) an algal biomass or any parts thereof, wherein the algal biomass is chosen from eukaryotic algae or prokaryotic algae sources, and (2) one or more proteins, peptides, antibodies, antibody fragments, or combination thereof, which are non-native to an organism of the algal biomass.

18 (withdrawn): The method of claim 17, wherein the composition is a feed.

19 (withdrawn): The method of claim 17, wherein the composition is a feed additive.

20 (withdrawn): The method of claim 17, wherein the composition is therapeutic.

21 (withdrawn): The method of claim 17, wherein the protein, peptide, antibody, antibody fragment, or combination thereof confers passive immunity upon the animal.

22 (withdrawn): The method of claim 17, wherein the animal is raised in aquaculture.

23 (withdrawn): The method of claim 2, wherein the animal is chosen from a fish and a crustacean.

24 (withdrawn): The method of claim 23, wherein the animal is chosen from a salmon and a shrimp.

25 (withdrawn): The method of claim 17, wherein the animal is raised in agriculture.

26 (withdrawn): The method of claim 25, wherein the animal is chosen from cattle, pigs, and fowl.

27 (withdrawn): The method of claim 17, wherein the animal is a human.

28-31 (canceled)

32 (withdrawn): The composition of claim 28, wherein the yeast biomass comprises a recombinant virus that expresses the protein, peptide, antibody, antibody fragment, or combination thereof.

33-34 (canceled)

35 (withdrawn): The composition of claim 33, wherein the pathogen is chosen from Taura Syndrome Virus, White Spot Syndrome Virus, and Infectious Pancreatic Necrosis Virus.

36-37 (canceled)

38 (withdrawn): The composition of claim 28, wherein the protein, peptide, antibody, antibody fragment, or combination thereof comprises an immunogenic epitope.

39-40 (canceled)

41 (withdrawn): A method of feeding an animal comprising administering to said animal a composition comprising (1) a yeast biomass or any parts thereof, and (2) one or more proteins, peptides, antibodies, antibody fragments, or combination thereof, which are non-native to the organism of the yeast biomass.

42 (withdrawn): The method of claim 41, wherein the composition is a feed.

43 (withdrawn): The method of claim 41, wherein the composition is a feed additive.

44 (withdrawn): The method of claim 41, wherein the composition is therapeutic.

45 (withdrawn): The method of claim 41, wherein the protein, peptide, antibody, antibody fragment, or combination thereof confers passive immunity upon the animal.

46 (withdrawn): The method of claim 41, wherein the animal is raised in aquaculture.

47 (withdrawn): The method of claim 46, wherein the animal is chosen from a fish and a crustacean.

48 (withdrawn): The method of claim 47, wherein the animal is chosen from a salmon and a shrimp.

49 (withdrawn): The method of claim 41, wherein the animal is raised in agriculture.

50 (withdrawn): The method of claim 49, wherein the animal is chosen from cattle, pigs, and fowl.

51 (withdrawn): The method of claim 41, wherein the animal is a human.

52-56 (canceled)

57 (withdrawn): The composition of claim 56, further comprising a recombinant virus that expresses the protein, peptide, antibody, antibody fragment, or combination thereof.

58-61 (canceled)

62 (withdrawn): The composition of claim 52, wherein the protein, peptide, antibody, antibody fragment, or combination thereof comprises an immunogenic epitope.

63-64 (canceled)

65 (withdrawn): A method of feeding an animal comprising administering to said animal a composition comprising (1) a fungal biomass or any parts thereof, and (2) one or more proteins, peptides, antibodies, antibody fragments, or combination thereof, which are non-native to the fungi of the biomass.

66 (withdrawn): The method of claim 65, wherein the composition is a feed.

67 (withdrawn): The method of claim 65, wherein the composition is a feed additive.

68 (withdrawn): The method of claim 65, wherein the composition is therapeutic.

69 (withdrawn): The method of claim 65, wherein the protein, peptide, antibody, antibody fragment, or combination thereof confers passive immunity upon the animal.

70 (withdrawn): The method of claim 65, wherein the animal is raised in aquaculture.

71 (withdrawn): The method of claim 70, wherein the animal is chosen from a fish and a crustacean.

72 (withdrawn): The method of claim 71, wherein the animal is chosen from a salmon and a shrimp.

73 (withdrawn): The method of claim 65, wherein the animal is raised in agriculture.

74 (withdrawn): The method of claim 73, wherein the animal is chosen from cattle, pigs, and fowl.

75 (withdrawn): The method of claim 65, wherein the animal is a human.

76 (withdrawn): A composition comprising (1) a bacterial biomass or any parts thereof, (2) one or more proteins, peptides, antibodies, antibody fragments, or combination thereof, which are non-native to the bacteria of the biomass, and (3) a recombinant virus that expresses the protein, peptide, antibody, antibody fragment, or combination thereof.

77 (withdrawn): The composition of claim 76, wherein the composition is a feed.

78 (withdrawn): The composition of claim 76, wherein the composition is a feed additive.

79 (withdrawn): The composition of claim 76, wherein the composition is therapeutic.

80 (withdrawn): The composition of claim 76, wherein the protein, peptide, antibody, antibody fragment, or combination thereof, inhibits the growth or replication of a pathogen.

81 (withdrawn): The composition of claim 80, wherein the pathogen is chosen from *Vibrio*, Taura Syndrome Virus, White Spot Syndrome Virus, and Infectious Pancreatic Necrosis Virus.

82 (withdrawn): The composition of claim 76, wherein the protein, peptide, antibody, antibody fragment, or combination thereof is bactericidal or bacteriostatic.

83 (withdrawn): The composition of claim 82, wherein the protein, peptide, antibody, antibody fragment, or combination thereof is chosen from cecropins, penaeidins, bactenecins, callinectins, myticins, tachyplesins, clavanins, misgurins, pleurocidins, parasins, histones, acidic proteins, and lysozymes.

84 (withdrawn): The composition of claim 76, wherein the protein, peptide, antibody, antibody fragment, or combination thereof comprises an immunogenic epitope.

85 (withdrawn): The composition of claim 52, wherein the fungal biomass or any parts thereof is probiotic.

86 (withdrawn): A method of feeding an animal comprising administering to said animal a composition comprising (1) a bacterial biomass or any parts thereof, and (2) one or more proteins, peptides, antibodies, antibody fragments, or combination thereof, which are non-native to an organism of the bacterial of the biomass, and (3) a

recombinant virus that expresses the protein, peptide, antibody, antibody fragment, or combination thereof.

87 (withdrawn): The method of claim 86, wherein the composition is a feed.

88 (withdrawn): The method of claim 86, wherein the composition is a feed additive.

89 (withdrawn): The method of claim 86, wherein the composition is therapeutic.

90 (withdrawn): The method of claim 86, wherein the polypeptide confers passive immunity upon the animal.

91 (withdrawn): The method of claim 86, wherein the animal is raised in aquaculture.

92 (withdrawn): The method of claim 96, wherein the animal is chosen from a fish and a crustacean.

93 (withdrawn): The method of claim 92, wherein the animal is chosen from a salmon and a shrimp.

94 (withdrawn): The method of claim 86, wherein the animal is raised in agriculture.

95 (withdrawn): The method of claim 94, wherein the animal is chosen from cattle, pigs, and fowl.

96 (withdrawn): The method of claim 86, wherein the animal is a human.

97 (withdrawn): The method of claim 86, wherein the composition expresses the protein, peptide, antibody, antibody fragment, or combination thereof.

98 (canceled)



99 (withdrawn): The composition of claim 98, wherein the peptides comprise antibodies.

100 (withdrawn): The composition of claim 98, wherein the antibodies comprise vaccines.

101 (withdrawn): The composition of claim 98, wherein the peptides comprise antibody fragments.

102 (withdrawn): The composition of claim 98, wherein the peptides comprise proteins.

103-105 (canceled)

106 (withdrawn): The composition of claim 105, further comprising a recombinant virus that expresses the peptide.

107-119 (canceled)

120 (new): A method of treating shrimp, wherein the method comprises feeding to the shrimp a homogenized fungal biomass containing at least one acidic bactericidal or bacteriostatic peptide, wherein, the peptide is non-native to the fungi, and wherein the biomass is fed to the shrimp in an amount sufficient to produce a bactericidal or bacteriostatic effect in the shrimp.

121 (new): The method of claim 120, wherein the bactericidal or bacteriostatic effect comprises an immunologic response.

122 (new): The method of claim 120, wherein the fungal biomass comprises yeast.

123 (new): The method of claim 120, wherein the fungal biomass comprises *Mortierella*.